



Electro-Voice®

a MARK IV company

Model AC24M/AC24S Phantom Power Supply

SPECIFICATIONS

Type:

Regulated dc power supply

Output Voltage:

24 V dc $\pm 2\%$

Maximum Output Load Current:

72 mA

Unbalanced Hum and Noise Level at

Microphone; A Weighted:

1 μ V (typical)

Equivalent Phantom Source Resistance:

1215 ohms $\pm 1\%$

Regulation,

Line:

105-125 V 0.2% typical

Load:

0-72 mA 0.2% typical

Crosstalk Between Any Two Microphone

Inputs:

120 dB (typical)

Input Line Voltage:

105-125 V 50/60 Hz

Power Line Consumption:

4 watts maximum

Phasing:

Positive voltage on pin 2 of input provides positive voltage on pin 2 of output

Connectors:

3 pin professional XLR-type

Dimensions,

AC24M:

55 mm (2 $\frac{1}{32}$ in.) high,

155 mm (6 $\frac{1}{8}$ in.) wide,

127 mm (5 in.) deep

AC24S:

62 mm (2 $\frac{7}{16}$ in.) high,

158 mm (6 $\frac{1}{32}$ in.) wide,

127 mm (5 in.) deep

Weight,

AC24M:

1172 grams (2 lb, 9 oz)

AC24S:

963 grams (2 lb, 2 oz)

DESCRIPTION

The Electro-Voice Model AC24M is a remote ac power supply designed for use with condenser microphones. Inserted in the microphone line between the microphone and the mixer, the AC24M provides 24 volts dc via the phantom method. The AC24M will power two microphones directly and with the use of the AC24S expander modules, will power approximately ten microphones, depending upon current required for each microphone.

The AC24S expander module is designed for use with the AC24M. Utilizing a mechanical nesting concept, the AC24S mates with the AC24M to provide a rugged mechanical package. The AC24S draws the power it requires from the AC24M power supply and distributes it to four additional sets of microphone connectors. There is a connector on the top of the expander module that will accept additional AC24S expander modules. The stacking of additional expander modules increases the total number of microphones that the AC24M is capable of powering. **NOTE:** The AC24S must be used in conjunction with the AC24M.

The AC24M is ready for use as it comes in the box. The power supply requires 105 to

120 volts ac, 50 to 60 Hz, for proper operation. The power supply may be inserted anywhere in the microphone line between the microphone and the mixer input.

OPERATION OF THE AC24M/AC24S

The power cord of the AC24M should be plugged into an outlet providing 105 to 120 volts ac (50 to 60 Hz).

The power supply is connected in line between the microphone requiring power and the mixer input. The microphone is connected via a standard microphone cable to the female XLR-type chassis connector on the AC24M labeled "From Microphone." The male XLR-type chassis connector labeled "To Mixer" is connected via a microphone cable to the mixer input. Because there are two channels of power available on the AC24M and four channels on the AC24S, be careful to use the correct input/output connector combinations. The proper connector combination is identified by the arrows on the top of the supply. The mating connector for the female XLR is located directly across the box.

No pads, filters or signal conditioners of any type should be inserted between the microphone and the power supply.

The AC24M and AC24S are intended to work into a balanced load only. This includes equipment having input transformers with either floating or grounded center-tap primaries, and balanced, operational amplifier inputs.

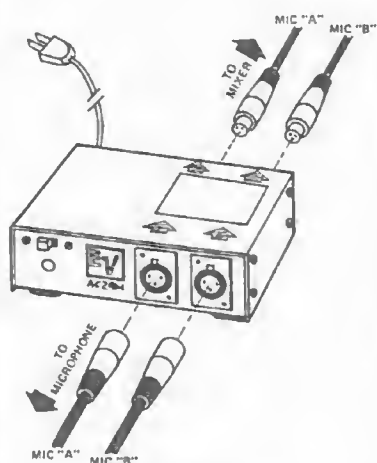


FIGURE 1
Connection to AC24M

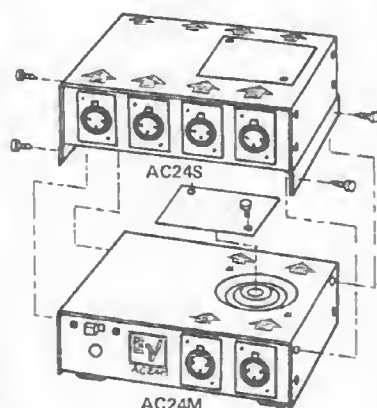


FIGURE 2
Assembly of AC24S on AC24M

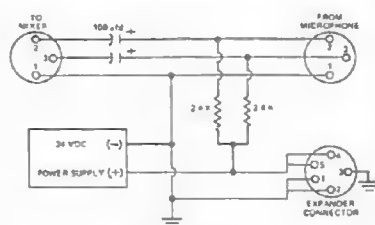


FIGURE 3
Simplified Schematic
Typical of One Channel

When used with unbalanced (one side grounded) loads, it is necessary to add a 1:1 isolation transformer in each line between the power supply and its load.

Only high quality microphone cables in good condition should be used with microphones employing phantom power. Because current flows through the shield, shorts or opens in the shield will cause loud noise transients to occur.

DETERMINING THE NUMBER OF MICROPHONES THAT THE AC24M/AC24S WILL POWER

Each AC24S expands the number of microphones that the AC24M will power by four (4). The number of expander modules that the AC24M is capable of handling depends upon the current required by the individual microphones. The AC24M is capable of providing a total of 72 milliamps of current. To determine the number of microphones that the AC24M can power, divide 72 milliamps by the current required per microphone.

EXPANDING THE AC24M

The AC24M will accept the AC24S expander module. The AC24S is placed on top of the AC24M in a "piggyback" fashion.

The only tool required for assembly is a cross recess (Phillips) blade screwdriver.

To attach the AC24S to the AC24M follow these simple steps.

Assembly Instructions:

1. Remove the connector cover plate from the top of the AC24M by removing the two sheet metal screws that hold it in place.
2. On the sides of the AC24M, remove the two top sheet metal screws. Hold on to these four screws, as they will be used later.
3. Place the AC24S over the AC24M and align the two 5 pin sockets.
4. Press the AC24S down on top of the AC24M. The sides of the AC24S should overlap onto the sides of the AC24M.

5. Replace the four screws previously removed from the AC24M. These screws should be placed through the holes in the bottom lip of the AC24S and screwed into the side of the AC24M.

6. This completes the assembly of the AC24M and AC24S.

NOTE: The above procedure should be followed to stack additional AC24S units on the existing assembly.

The mating connector required for the AC24M is an Amphenol 86-CP5. The positive voltage is paralleled across pins 4 and 5. The negative voltage is paralleled across pins 1 and 2.

WARRANTY (Limited) — Electro-Voice Accessories are guaranteed for one year from date of original purchase against malfunction due to defects in workmanship and materials. If such malfunction occurs, unit will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to the proper Electro-Voice service facility. Unit will be returned prepaid. Warranty does not extend to finish, appearance items or malfunction due to abuse or operation under other than specified conditions, nor does it extend to incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. Repair by other than Electro-Voice or its authorized warranty service agencies will void this guarantee. A list of authorized service centers is available from Electro-Voice, Inc., 600 Cecil Street, Buchanan, MI 49107 (AC/616-695-6831); or Electro-Voice West, 8234 Doe Avenue, Visalia, CA 93291 (AC/209-651-7777). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Service and repair address for this product: Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107.

Specifications subject to change without notice.



ELECTRO-VOICE, INC., 600 Cecil Street, Buchanan, Michigan 49107

MANUFACTURING PLANTS AT ■ BUCHANAN, MI ■ NEWPORT, TN ■ SEVIERVILLE, TN ■ OKLAHOMA CITY, OK ■ GANANOCQUE, ONT
© Electro-Voice, Inc. 1990 ■ Litho In U.S.A. Part Number 53483-825

a MARK IV company